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Our Case No. 9281-3950  
Client Reference No. S US00029

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: )  
Yasuharu Kudo )  
Serial No. To Be Assigned )  
Filing Date: Herewith )  
For: Television Signal Transmitter )  
Attenuating Unwanted Signal While )  
Maintaining Match Between Circuits )

**PRELIMINARY AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Prior to examination of the above-identified application, please amend the application as follows:

**In the Specification**

Please rewrite the paragraph on page 1, lines 16-22 as follows:

(Amended) A television intermediate frequency (IF) signal outputted from a modulator (not shown) is supplied to the IF amplifier 51. A video intermediate frequency and a sound intermediate frequency of the IF signal are, for example, 45.75 MHz and 41.25 MHz, respectively, according to U.S. specifications. The IF signal amplified by the IF amplifier 51 is supplied to the mixer 52.

Please rewrite the paragraph on page 3, lines 2-9 as follows:

(Amended) In the above configuration, for example, when changing the frequency of the RF signal and/or the degree of modulation of the IF signal, there is the possibility that an unwanted signal generated by the change is outputted and negatively impacts other devices. Consequently, it is necessary to prevent the

generation of these unwanted signals. By operating the RF relay 56 at the time of such a change so as to be switched off, the RF signal is not outputted.

Please rewrite the paragraph beginning on page 3, line 23 and ending on page 4, line 10 as follows:

(Amended) According to the invention, there is provided a television signal transmitter comprising: a local oscillator for outputting a local oscillation signal; a mixer for mixing a supplied television intermediate frequency signal with the local oscillation signal and frequency-converting a resultant signal to a television signal of a specific channel through which the signal is to be transmitted among television channels; and a variable band-pass filter connected at a post stage of the mixer and tuned to a frequency of the specific channel, wherein a tuning frequency of the variable band-pass filter can be shifted to a frequency out of a frequency band of the specific channel.

Please rewrite the section on page 6, lines 1-9 as follows:

#### (Amended) BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a circuit diagram showing a television signal transmitter according to a first embodiment of the invention.

FIG. 2 is a diagram for explaining operations of the television signal transmitter of the invention.

FIG. 3 is a circuit diagram showing a television signal transmitter according to a second embodiment of the invention.

FIG. 4 is a circuit diagram showing the configuration of a conventional television signal transmitter.

Please rewrite the paragraph on page 6, lines 11-19 as follows:

(Amended) Referring to Figs. 1 and 2, a television signal transmitter according to a first embodiment of the invention will be described. The television signal transmitter according to the invention has, as shown in Fig. 1, an intermediate frequency (IF) amplifier 1, a mixer 2, a local oscillator 3, a radio frequency (RF) band-pass filter 4, a radio frequency (RF) amplifier 5, a memory (ROM) 6, a control unit (MPU) 7, a D/A converter 8, an adder 9, a first external power source 10, a first switching means 11, and the like.

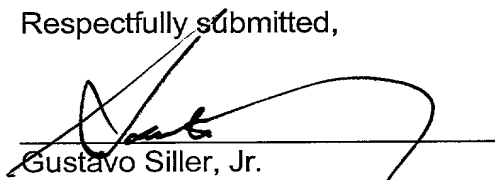
Please rewrite the paragraph on page 11, lines 1-14 as follows:

(Amended) Fig. 3 shows a television signal transmitter according to a second embodiment of the invention. A control voltage outputted from the D/A converter 8 is applied to the local oscillator 3. To each of the band-pass filters 4-1 to 4-3, one of a control voltage outputted from the D/A converter 8, the voltage of a second external power source 13, and the voltage of a third external power source 14 is applied by second switching means 12. The voltage of the second external power source 13 is a voltage (1 volt) which sets the tuning frequency of each of the band-pass filters 4-1 to 4-3 to be lower than the first frequency F1. The voltage of the third external power source 14 is a voltage (20 volts) which sets the tuning frequency of each of the band-pass filters 4-1 to 4-3 to a voltage higher than the second frequency F2.

### REMARKS

Applicant has rewritten portions of the specification. The changes from the previous version to the rewritten version are shown in attached Appendix A, with strikethrough for deleted matter and underlines for added matter.

Respectfully submitted,



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**APPENDIX A**  
**Attorney Docket No. 9281-3950**  
**Television Signal Transmitter Attenuating Unwanted Signal**  
**While Maintaining Match Between Circuits**  
**Yasuharu Kudo**

**In the Specification**

Please amend the paragraph on page 1, lines 16-22 as follows:

(Amended) A television intermediate frequency (IF) signal outputted from a modulator (not shown) is supplied to the IF amplifier 51. A video intermediate frequency and a sound intermediate frequency of the IF signal are, for example, 45.75 MHz and 41.25 MHz, respectively, in accordance to U.S. specifications. The IF signal amplified by the IF amplifier 51 is supplied to the mixer 52.

Please amend the paragraph on page 3, lines 2-9 as follows:

(Amended) In the above configuration, for example, ~~in the case of when~~ changing the frequency of the RF signal and ~~in the case of changing~~ or the degree of modulation of the IF signal, there is the possibility that an unwanted signal generated by the change is outputted and ~~it disturbs~~ negatively impacts other devices. Consequently, it is necessary to prevent the generation of these unwanted signals. By operating the RF relay 56 at the time of such a change so as to be switched off, the RF signal is not outputted.

Please amend the paragraph beginning on page 3, line 23 and ending on page 4, line 10 as follows:

(Amended) According to the invention, ~~in order to achieve the object,~~ there is provided a television signal transmitter comprising: a local oscillator for outputting a local oscillation signal; a mixer for mixing a supplied television intermediate frequency signal with the local oscillation signal and frequency-converting a resultant signal to a television signal of a specific channel through which the signal is to be transmitted among television channels; and a variable band-pass filter connected at a post stage of the mixer and tuned to a frequency of the specific channel, wherein a tuning frequency of the variable band-pass filter can be shifted to a frequency out of a frequency band of the specific channel.

Please amend the section on page 6, lines 1-9 as follows:

(Amended) BRIEF DESCRIPTION OF THE DRAWINGS

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FIG. 3 is a circuit diagram showing a television signal transmitter as according to a second embodiment of the invention.

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Please amend the paragraph on page 6, lines 11-19 as follows:

(Amended) Referring to Figs. 1 and 2, a television signal transmitter as according to a first embodiment of the invention will be described. The television signal transmitter according to the invention has, as shown in Fig. 1, an intermediate frequency (IF) amplifier 1, a mixer 2, a local oscillator 3, a radio frequency (RF) band-pass filter 4, a radio frequency (RF) amplifier 5, a memory (ROM) 6, a control unit (MPU) 7, a D/A converter 8, an adder 9, a first external power source 10, a first switching means 11, and the like.

Please amend the paragraph on page 11, lines 1-14 as follows:

(Amended) Fig. 3 shows a television signal transmitter as according to a second embodiment of the invention. A control voltage outputted from the D/A converter 8 is applied to the local oscillator 3. To each of the band-pass filters 4-1 to 4-3, one of a control voltage outputted from the D/A converter 8, the voltage of a second external power source 13, and the voltage of a third external power source 14 is applied by second switching means 12. The voltage of the second external power source 13 is a voltage (1 volt) which sets the tuning frequency of each of the band-pass filters 4-1 to 4-3 to be lower than the first frequency F1. The voltage of the third external power source 14 is a voltage (20 volts) which sets the tuning frequency of each of the band-pass filters 4-1 to 4-3 to a voltage higher than the second frequency F2.